

A NEW ARMY ANT FROM SOUTHERN TEXAS (HYMENOPTERA: FORMICIDAE)

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ABSTRACT—A new species of army ant is described from the Kleberg Airport of Kleberg Co., southern Texas, USA. This species is based on 25 workers collected from a subterranean bait trap. The male and female are unknown. This species differs from most others in the genus in that the mandible has three large teeth which are subequal in size and shape. Smaller teeth or denticles are present on the mandibles of some of the workers of the series. It is most similar morphologically to *N. moseri* and distinguishing characteristics are given to separate the two species.

RESUMEN—Se describe una nueva especie de hormiga legionaria del aeropuerto del condado de Kleberg, del sur de Texas, EUA. Esta descripción está basada en 25 obreras colectadas en una trampa carnada subterránea. La hembra y el macho son aún desconocidos. Esta especie se diferencia de la mayoría de las especies del género en que la mandíbula tiene tres dientes grandes casi iguales en forma y tamaño. Hay dientecillos presentes en las mandíbulas de algunas obreras de la serie. Es semejante morfológicamente a *N. moseri* y se presentan características para distinguir las dos especies.

Army ants of the genus *Neivamyrmex* are among the best known groups of ants in the New World, due to the intensive efforts of Borgmeier (1955) and Watkins (1976, 1982, 1985). Even though this group is relatively well known, new species frequently are reported (Watkins, 1986, 1990, 1993). I have been using bait tubes (MacKay and Vinson, 1989) for a number of years and have collected several rare and new species. This paper reports an additional new species from the United States collected using this technique.

METHODS AND MATERIALS—Baits were placed in a grassy area and in a surrounding area with a few small trees at the west edge of the Kleberg Airport, Kleberg Co., Texas. Baits were placed on the surface and at 5 cm below the soil surface, in a straight line, for a total of 20 stations (10 in grassy area, 10 in the area with trees), spaced at a distance of 10 m apart. A pitfall trap also was installed at each of the stations. Baits and pitfall traps at each station were separated by a distance of 1 m. Bait tubes were filled with a mealworm or a cooked mixture of sugar and ground beef and exposed to foragers for periods of 30 min to 6 h (surface baits) or 24 h (subterranean baits) beginning on 27 July 1987. One of the subterranean baits containing a mealworm was found by a colony of the new species. The sample was collected at 1900 h.

Neivamyrmex isodentatus new species

Fig. 1

Diagnosis—This species can be distinguished easily from all others in the genus, except *N. moseri*, by the presence of three subequal teeth on the mandibles. These teeth are similar in both size and shape. Smaller teeth or denticles may also be present. This species is morphologically most similar to *N. moseri*, but differs in the sculpture of the mesosoma and petiole, in addition to other characters.

Description—Worker measurements (mm): Head Length 0.48–0.71, head width 0.40–0.74, scape length 0.20–0.34, Weber's length 0.78–0.99, petiolar node width 0.16–0.29, Petiolar node length 0.15–0.25, postpetiole width 0.18–0.33, postpetiole length 0.11–0.23.

Mandibles with three subequal teeth (Fig. 1-3), often with one or two tiny teeth or denticles located between them (Fig. 1-4); anterior border of clypeus straight, sides of head convex; vertex concave (Fig. 1-5); eyes apparently absent (position may be indicated by a puncture); scape short, not reaching half length of head; pronotum without dorsal transverse ridge, propodeum not lower than level of

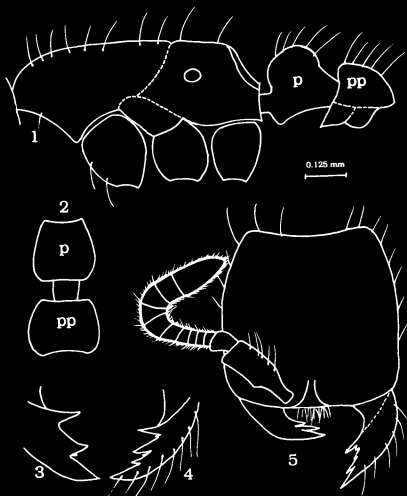


FIG. 1—1) Lateral view of mesosoma, petiole (p) and postpetiole (pp); and 2) dorsal view of petiole (p) and postpetiole (pp) of holotype worker of *N. isodontatus*; 3) mandible (right) of larger worker paratype of *N. isodontatus*; 4) mandible (left) of holotype of *N. isodontatus*; and 5) head (full face view) of the holotype worker of *N. isodontatus*. All figures are drawn to the same scale.

mesonotum and pronotum (Fig. 1-1), broadly angulate between dorsal face and posterior face, but without transverse carina, dorsal face and posterior face about equal in length, posterior face not concave and without carinae along lateral edges; petiole node about as wide as long, wider posteriorly (Fig. 1-2); postpetiole wider than long.

Most body surfaces with hairs about 0.1 mm in length, anterior border of clypeus with a row of dense hairs (Fig. 1-5); funiculus with dense, short, bristly hairs; decumbent pubescence absent. Body surfaces are polished and clear

golden yellow in color. Large punctures are present on most body surfaces, and are most evident on the head and dorsum of mesosoma.

Female and Male—Unknown.

Type Series—Holotype worker (Museum of Comparative Zoology, Harvard University) and 24 paratype workers (United States National Museum, Texas A&M University, British Museum of Natural History, Museo de Historia Nacional, Colombia, Museu de Zoologia da Universidade de São Paulo, collection of Dr. Julian Watkins, and the Laboratory for Environmental Biology, University of Texas); USA, Texas,

Kleberg Co., Kleberg Airport, 28-vii-1987, W. MacKay #9464L.

Material Examined—Twenty five workers.

Distribution—Known only from type locality.

Etymology—Derived from Greek: *iso*—equal, like and Latin: *dentatus*—toothed, referring to the three teeth which are similar in size and shape.

DISCUSSION—This species is morphologically most similar to *N. moseri*, but differs in that the side of the mesosoma is weakly sculptured and the sculpture on the side of the mesopleuron is similar to that on the side of the propodeum (the side of the mesopleuron of *N. moseri* is almost smooth and shining, that on the side of the propodeum is strongly areolate-rugulose, thus the sculptures of the two surfaces are very different), the side of the petiole is almost smooth (side of petiole of *N. moseri* is punctate), the anterior inner border of the frontal carinae protrudes as a blunt low keel (rounded in *N. moseri* with little development of the keel), the propodeal spiracle is directed laterally (directed somewhat posteriorly in *N. moseri* due to an elevated region at the anterior half of spiracle) and the funiculus has fewer short bristly hairs (more dense, some as long as diameter of segments in *N. moseri*).

The mandibles consistently have three subequal teeth. The mandible of the medium sized holotype worker (Fig. 1) is typical of the series. Workers of a similar size and smaller workers have somewhat delicate teeth, usually with one or more smaller teeth between the larger ones. The largest workers have more robust mandibles (Fig. 1), with broad teeth and with fewer smaller teeth between the larger teeth.

Biology—This species apparently is subterranean, as it lacks eyes and was collected in a subterranean bait. No specimens were collected in surface baits or in pitfall traps. It was

collected in a highly disturbed area in a grassland mixed with a few small trees (*Acacia* sp., *Prosopis* sp.). The area is flat with loam soils. *Neivamyrmex harrisi* (Haldeman) and *N. swainsoni* (Shuckard), in addition to several other ant species, occur in the area. *Labidus coccus* (Latreille) and *Solenopsis geminata* (Fabricius) were also collected in subterranean traps. The area was moderately infested with the red imported fire ant, *Solenopsis invicta* Buren.

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